Allium campanulatum Wats.

Sierra onion

Liliaceae (Lily Family)

Status: State Review Group 1
Rank: G5T?S?

General Description: Adapted from Hitchcock et al. (1969): This bulb bearing perennial forb commonly produces either a cluster of short-stalked basal bulblets or a cluster of basal filiform rhizomes up to 4 in. (10 cm) long, which terminate with small bulblets. There are ordinarily 2 leaves (more on some robust individuals) which are concave-convex, 1/32 to ½ in. (1 to 10 mm), but usually less than ¼ in. (5 mm), broad, about equaling the scape in length, and usually withering at anthesis. The scape is 2 to 12 in. (5 to 30 cm), but usually less than 6 in. (15 cm) tall, more or less circular in cross section, and usually solitary but frequently with 2 or more from a single bulb. There are 2 to 3 bracts that are distinct, ovate to lanceolate, acuminate, and mostly 3- to 5-nerved. The umbel is few- to many flowered with pedicels up to 4 times the length of the perianth, commonly becoming coarsely wavy and strongly bent or turned abruptly downward in the fruit. The perianth segments are often 1/8 to ½ in. (4 to 10 mm) long, ovate to narrowly lanceolate, acuminate, entire, purplish, commonly with a purple crescent at the base, or rarely white, becoming rigid in fruit, the tips strongly rolled or turned in over the upper surface, and usually with a pronounced keel. The stamens are shorter than the perianth and the anthers are oblong and obtuse. The ovary is conspicuously crested with 6 flattened papillose-denticulate processes, with a capitate stigma.

Identification Tips: *Allium campanulatum* closely resembles *A. bisceptrum* var. *bisceptrum*. However, these two species can be distinguished by leaf and perianth characteristics. The leaves of *A. campanulatum* are commonly withering by anthesis, the perianth segments are rigid in fruit, and the tips of the perianth are strongly involute and usually with a pronounced keel. The leaves of *A. bisceptrum* are usually green at anthesis, the perianth segments are usually papery, waxy, and bent down in fruit, and the tips of the perianth are rarely either strongly involute or with a pronounced keel.

Phenology: Flowers between June and July.

Range: This taxon is found from the mountains of California and Nevada, running north and east to the Ochoco, Strawberry, and Steens mountains of eastern Oregon. In Washington, *A. campanulatum* has been recorded in Columbia County.

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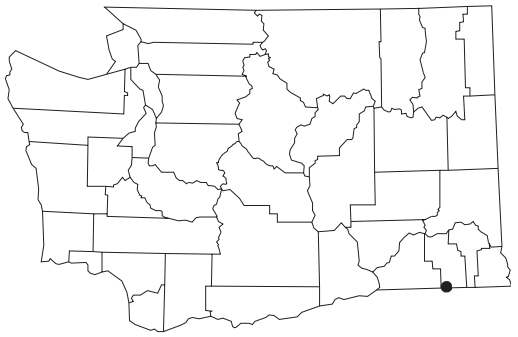
Known distribution of *Allium campanulatum* in Washington



● Current (1980+)
○ Historic (older than 1980)

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Photo by Steve Matson


Photo by Michael Charters


Photo by Steve Matson

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Habitat: *Allium campanulatum* prefers dry soils at medium to high elevations in the mountains in other regions; however, in Washington the one known population was located in an intermittent streambed along a ridge top at an elevation of 5500 ft (1676 meters). Associated species include big-leafed lupine (*Lupinus polyphyllus*), small winged sedge (*Carex microptera*), northern willow herb (*Epilobium glandulosum*), Kellogg's knotweed (*Polygonum kelloggii*), birchleaf spirea (*Spiraea betulifolia*), Greene mountain ash (*Sorbus scopulina*), speckled alder (*Alnus incana*), and subalpine fir (*Abies lasicarpa*).

Ecology: This species thrives in dry to sometimes moist environments at medium to high elevations.

State Status Comments: Only one small population has been found in the state. Because this population is reproductively isolated, it may have developed significant genetic differences and different environmental tolerances from populations in the heart of the species' range.

Inventory Needs: Medium to high elevation areas in Columbia County should be systematically surveyed and updated information about these populations should be collected. The one documented occurrence should be re-visited.

Threats and Management Concerns: Definite threats have not been identified for this species. However, the small range of this taxon in Washington and the small number of known occurrences are major concerns. Any disturbance to the immediate habitat, such as grazing, development, and recreational activities, may constitute a threat. The one known population of *A. campanulatum* is located in the Umatilla National Forest.

References:

Hitchcock, C.L., A. Cronquist, M. Ownbey, J.W. Thompson. 1969. *Vascular Plants of the Pacific Northwest* Part 1: *Vascular Cryptogams, Gymnosperms, and Monocotyledons.* University of Washington Press, Seattle, WA. 914 pp.

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